**What is claimed is:**

1.   A method for defect compensation in a color image
sensor having pixels, the method comprising the steps of:
      predetermining a first and second threshold, and
          defining a window;
      identifying peak and normal pixels, wherein the peak is
          one of the pixels that has a color difference
          larger than the first threshold from two adjacent
          pixels of the same color, and the normal pixels
          are those other than the peak;
      identifying the peak as a defect if each of the two
          pixels immediately adjacent to the peak has a
          color difference smaller than the second
          threshold from two adjacent pixels of the same
          color, and all the other pixels in the window
          positioned according to the location of the peak
          are normal pixels; and
      correcting a color value of the defect.

2.   The method as claimed in claim 1 further
comprising the step of:
      storing a plurality of data bits, each of which
          indicates one peak and one normal pixel.

3.   The method as claimed in claim 1, wherein the
pixels are red, blue and green.

4.   The method as claimed in claim 1, wherein the
pixels are red, yellow and cyan.

1    5.    The method as claimed in claim 1, wherein the
2    color image sensor is a CMOS sensor.

1    6.    The method as claimed in claim 1, wherein the
2    color value of the defect is corrected as a mean of the
3    color values of two adjacent pixels of the same color.

1    7.    The method as claimed in claim 1, wherein the
2    first and second threshold, and the window are programmable.

1    8.    An apparatus for defect compensation in a color
2    image sensor having pixels, the apparatus comprising:
3    a memory device; and
4    a processor implementing the steps of:
5        predetermining a first and second threshold, and
6            defining a window;
7        identifying peak and normal pixels, wherein the
8            peak is one of the pixels that has a color
9            difference larger than the first threshold
10           from two adjacent pixels of the same color,
11           and the normal pixels are those other than
12           the peak;
13       storing a plurality of data bits in the memory
14           device, wherein each of the data bits
15           indicates one peak and one normal pixel;
16       identifying the peak as a defect if each of the
17           two pixels immediately adjacent to the peak
18           has a color difference smaller than the
19           second threshold from two adjacent pixels of
20           the same color, and all the other pixels in

21              the window positioned according to the
22                  location of the peak are normal pixels; and
23             correcting a color value of the defect.

1      9.    The apparatus as claimed in claim 8, wherein the
2 pixels are red, blue, and green.

1      10.   The apparatus as claimed in claim 8, wherein the
2 pixels are red, yellow, and cyan.

1      11.   The apparatus as claimed in claim 8, wherein the
2 color image sensor is a CMOS sensor.

1      12.   The apparatus as claimed in claim 8, wherein the
2 color value of the defect is corrected as a mean of the
3 color values of two adjacent pixels of the same color.

1      13.   The apparatus as claimed in claim 8, wherein the
2 first and second threshold, and the window are programmable.

1      14.   A method for defect compensation in an image
2 sensor having pixels, the method comprising the steps of:
3            predetermining a first and second threshold, and
4                defining a window;
5            identifying peak and normal pixels, wherein the peak is
6                one of the pixels that has differences larger
7                than the first threshold from two adjacent
8                pixels, and the normal pixels are those other
9                than the peak;
10         identifying the peak as a defect if each of the two
11                pixels adjacent to the peak has differences
12                smaller than the second threshold from two

13        adjacent pixels, and all the other pixels in the

14        window positioned according to the location of

15        the peak are normal pixels; and

16      correcting a value of the defect.

1      15. The method as claimed in claim 14 further

2 comprising the step of:

3        storing a plurality of data bits, each of which

4          indicates one peak and one normal pixel.

1      16. The method as claimed in claim 14, wherein the

2 image sensor is a CMOS sensor.

1      17. The method as claimed in claim 14, wherein the

2 value of the defect is corrected as a mean of the values of

3 two adjacent pixels.

1      18. The method as claimed in claim 14, wherein the

2 first and second threshold, and the window are programmable.